



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

[Handwritten signature]

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/746,124	12/20/2000	Fulu Li	061473/0270197	9983

34845 7590 08/09/2004

STEUBING AND MCGUINNESS & MANARAS LLP
125 NAGOG PARK
ACTON, MA 01720

EXAMINER

PHAN, HANH

ART UNIT PAPER NUMBER

2633

DATE MAILED: 08/09/2004

[Handwritten signature]

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/746,124

Applicant(s)

LI, FULU

Examiner

Hanh Phan

Art Unit

2633

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 December 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 12-23 is/are rejected.
- 7) ☒ Claim(s) 9-11 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This Office Action is responsive to the Amendment filed on 05/10/2004.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-8 and 12-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Simmons (US Patent No. 6,396,852) in view of the Prior Art Figure. 1B.

Regarding claims 1 and 14, referring to figures 4 and 5, Simmons discloses a method for configuring an optical network having a plurality of nodes (i.e., nodes 1-4, Fig. 4) and a plurality of light-paths (i.e., light paths 24, 26, 28, 30 and 32, Fig. 4) between the nodes, comprising the steps of:

firstly combining together a first set of the light-paths into circular segments (Fig. 4); and

secondly concatenating together a second set of the light-paths into non-circular segments, the second set of the light-paths being comprised of a remainder of the plurality of light-paths less the first set of the light-paths (col. 2, lines 30-41 and col. 4, lines 12-63).

Art Unit: 2633

Simmons differs from claims 1 and 14 in that he fails to teach concatenating together a first set of the light paths into circular segments. However, the Prior Art Figure 1B teaches concatenating together a first set of the light paths into circular segments. Therefore, it would have been obvious to one having skill in the art at the time the invention was made to incorporate the concatenating together a first set of the light paths into circular segments in the system of Simmons. One of ordinary skill in the art would have been to do this since the Prior Art Figure 1B suggests that using such the concatenating together a first set of the light paths into circular segments have advantage of allowing minimizing the required number of add/drop multiplexers employed in the ring network.

Regarding claims 2 and 19, the combination of Simmons and Prior Art Fig. 1B teaches the firstly and second concatenating steps are performed so that no light-path in any of the circular segments and non-circular segments overlaps another light-path in the same circular segment and non-circular segment (Fig. 4 of Simmons and Prior Art Fig. 1B).

Regarding claims 3 and 20, the combination of Simmons and Prior Art Fig. 1B teaches the circular segments comprise at least one of the plurality of light-paths, a starting node of the at least one light-path and a terminating node of the at least one light-path being the same one of the plurality of nodes (Fig. 4 of Simmons and Prior Art Fig. 1B).

Regarding claims 4 and 21, the combination of Simmons and Prior Art Fig. 1B further teaches the circular segments comprise at least first and second ones

Art Unit: 2633

of the plurality of light-paths, a terminating node of the first light-path and a starting node of the second light-path being the same one of the plurality of nodes (Fig. 4 of Simmons and Prior Art Fig. 1B).

Regarding claims 5 and 22, the combination of Simmons and Prior Art Fig. 1B teaches the non-circular segments comprise at least one of the plurality of light-paths, a starting node of the at least one light-path and a terminating node of the at least one light-path being different ones of the plurality of nodes (Fig. 4 of Simmons and Prior Art Fig. 1B).

Regarding claims 6 and 23, the combination of Simmons and Prior Art Fig. 1B teaches the non-circular segments comprise at least first and second ones of the plurality of light-paths, a terminating node of the first light-path and a starting node of the second light-path being the same one of the plurality of nodes (Fig. 4 of Simmons and Prior Art Fig. 1B).

Regarding claims 7 and 15, the combination of Simmons and Prior Art Fig. 1B teaches the firstly concatenating step includes the step of searching the plurality light-paths in a top-down fashion so that circular segments having fewer light-paths are concatenated together before circular segments having more light-paths (Fig. 4 of Simmons, col. 2, lines 30-41 and col. 4, lines 12-63 and Prior Art Fig. 1B).

Regarding claims 8 and 16, the combination of Simmons and Prior Art Fig. 1B teaches the secondly concatenating step includes the step of searching the remainder of the plurality of light-paths in a reverse top-down fashion so that non-circular segments having more light-paths are concatenated together before non-

Art Unit: 2633

circular segments having fewer light-paths (Fig. 4 of Simmons and Prior Art Fig. 1B).

Regarding claims 12 and 17, the combination of Simmons and Prior Art Fig. 1B teaches the firstly and secondly concatenating steps are performed so that a number of the non-circular segments is minimized (Fig. 4 of Simmons and Prior Art Fig. 1B).

Regarding claims 13 and 18, the combination of Simmons and Prior Art Fig. 1B teaches assigning a respective unique wavelength to each of the circular segments and non-circular segments in accordance with an OWDM scheme (Figs. 4 and 5 of Simmons and Prior Art Fig. 1B).

Allowable Subject Matter

4. Claims 9-11 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

5. Applicant's arguments with respect to claims 1-23 have been considered but are moot in view of the new ground(s) of rejection.

Art Unit: 2633

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hanh Phan whose telephone number is (703)306-5840.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan, can be reached on (703)305-4729. The fax phone number for the organization where this application or proceeding is assigned is (703)872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-4700.



Hanh Phan

08/06/2004